



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,573	12/19/2001	Eric Klingler	CING-0619/769.US	3290
54499 7590 07/30/2007 WOODCOCK WASHBURN LLP CIRA CENTRE 12th Floor 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER PYZOSHA, MICHAEL J	
			ART UNIT 2137	PAPER NUMBER
			MAIL DATE 07/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/028,573

Applicant(s)

KLINGLER ET AL.

Examiner

Michael Pyzocha

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 18-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 18-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Art Unit: 2137

DETAILED ACTION

1. Claims 1-5, 18-28, and 30 are pending.
2. Amendment filed 06/27/2007 has been received and considered.

Claim Rejections - 35 USC § 112

3. The rejection under the second paragraph of 35 U.S.C. 112 has been withdrawn based on the filed amendments.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albert et al. (US 5991410) in view of Eftimakis et al (US 5889781) and further in view of Ayanoglu (US 5717689).

As per claim 1, Albert et al. discloses processing a message for transmission, wherein the message includes control

Art Unit: 2137

data and payload data, and wherein the control data is not encrypted and contains a particular control message wherein the control data is used to provide at least one other function related to the setup of a wireless communication (see column 16 lines 39-67 column 17 lines 12-23); detecting the particular control message (see column 16 lines 55-59); initializing the cryptosystem, using the cryptosystem to encrypt the message for transmission (see column 16 lines 55-67); receiving a message, including unencrypted control data and encrypted payload data, parsing the message for transmission to separate the unencrypted control data from the payload data; determining whether the control data contains the particular control message (see column 17 lines 17-20); if the unencrypted control data contains the particular unencrypted control message initializing the cryptosystem using the key and decrypting the payload data (see column 17 lines 17-23).

Albert et al. fails to disclose the counter and the use of an encrypted airlink packet for transmission over an airlink.

However, Eftimakis et al. teaches a counter (see column 7 lines 3-18) and Ayanoglu teaches the use of an airlink packet (see column 22 lines 43-49).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the counter of

Art Unit: 2137

Eftimakis et al and the airlink packet of Ayanoglu in the Albert et al. system.

Motivation to do so would have been to locate the synchronization information (see Eftimakis et al column 7 lines 3-18) to provide built in CRC for error detection (see column 22 lines 43-49).

Eftimakis et al teaches the counter starting at zero and ending at 49, however one of ordinary skill in the art would know a counter can be decremented to obtain the same results.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Eftimakis et al and Ayanoglu system as applied to claim 1 above, and further in view of Bender (US 6366779).

As per claim 2, the modified Albert et al., Eftimakis et al and Ayanoglu system fails to disclose the control message is a link control channel message.

However, Bender teaches such a message (see column 14 lines 38-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art for the modified Albert et al., Eftimakis et al and Ayanoglu system's control message to be a link control channel message.

Art Unit: 2137

Motivation to do so would have been to allow the base station to initiate a call (see column 14 lines 38-62).

7. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Eftimakis et al and Ayanoglu system as applied to claims above, and further in view of Schneier (Applied Cryptography).

As per claim 3, the modified Albert et al., Eftimakis et al and Ayanoglu system fails to disclose the use of a state box.

However, Schneier teaches such a state box (see pages 397-398).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Schneier's state box as the cryptosystem of the modified Albert et al., Eftimakis et al and Ayanoglu system.

Motivation to do so would have been the simplicity of the algorithm (see page 398).

As per claim 5, the modified Albert et al., Eftimakis et al, Ayanoglu and Schneier system discloses a RC4 state box and key (see Schneier pages 397-398).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Eftimakis et al, Ayanoglu and Schneier system as applied to claim 3 above, and further in view of Lynn (US 5345508).

Art Unit: 2137

As per claim 4, the modified Albert et al., Eftimakis et al, Ayanoglu and Schneier system operating on a state box using the altered key, wherein the state box is an array of data (see Schneier pages 397-398) but fails to disclose discloses performing a mathematical operation on the key to alter the key for security, wherein the key is an array of data.

However, Lynn teaches performing a mathematical operation on the key (see Lynn column 2 lines 54-64).

At the time of the invention would have been obvious a person of ordinary skill the art use Lynn's method for initiating an encryption/decryption process in the modified Albert et al., Eftimakis et al, Ayanoglu and Schneier system.

Motivation to do so would have been to provide self-synchronization (see Lynn column 2 lines 47-51).

9. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Eftimakis et al, Ayanoglu and Schneier system as applied above, and further in view of Dent (US 5060266).

As per claims 18-19, the limitations are substantially the same as claim 1 with the addition of a state box, and are therefore taught as in claim 3, but fail to disclose the use of the ACC level.

Art Unit: 2137

However, Dent teaches the use of such level (see column 6 lines 43-60 and column 7 lines 12-31).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the processing of the modified Albert et al., Eftimakis et al, Ayanoglu and Schneier system at the ACC level.

Motivation to do so would have been to provide a "blank and burst" mode of operation (see column 7 lines 12-31).

As per claim 20, the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system discloses sending an encryption key (see Lynn column 2 lines 54-64).

As per claim 21, the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system discloses changing the encryption key according to a predetermined algorithm (see Lynn column 2 lines 54-64).

As per claim 23, the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system discloses the method being performed each time the base station participates (see Albert et al. column 16 lines 36-67).

As per claim 22, the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system discloses the method being performed at the associated control channel level (see Dent column 6 lines 43-60 and column 7 lines 12-31).

Art Unit: 2137

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system as applied to claim 18 above, and further in view of Bender and NetBEUI (webpage).

As per claim 24, the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system fails to disclose the particular control message is a link control channel ("LCC") message that is a "set asynchronous balance mode" ("SABM") message and a "set asynchronous balance mode unnumbered acknowledge" ("SABMUA") message.

However, Bender teaches the LCC message (see column 14 lines 38-62) and NetBEUI teaches the SABM message (see page 1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art for the messages of the modified Albert et al., Eftimakis et al, Ayanoglu, Schneier and Dent system to be those of Bender and NetBEUI.

Motivation to do so would have been to allow the base station to initiate a call (see Bender column 14 lines 38-62) and to conform to the 802.2 protocol standard (see page 1).

11. Claims 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert et al. in view of Malek et al. (US 5243653) and further in view of Dent.

Art Unit: 2137

As per claim 25, Albert et al. discloses at least one digital signal processing means; at least one central processing means; and encryption synchronization means configured to detect a particular control message in a data transmission wherein the control data is used to provide at least one other function related to the setup of a wireless communication (see column 16 lines 39-67), wherein the particular control message is used according to a wireless communication protocol to provide at least one other control function under the wireless communication protocol and, in response, wherein the particular control message occurs just before the transmission of data (see columns 16 and 17 as applied above).

Albert et al. fails to disclose the method being performed at the associated control channel level and for telephony data.

However, Dent teaches the use of such level (see column 6 lines 43-60 and column 7 lines 12-31) and Malek et al. teaches telephony data (see column 4 lines 47-57).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the processing of the Albert et al. system on telephony data at the ACC level.

Motivation to do so would have been to provide a "blank and burst" mode of operation (see Dent column 7 lines 12-31) and to

Art Unit: 2137

provide a system that does not degrade the voice quality (see Malek column 2 lines 6-15).

As per claim 30, the modified Albert et al., Dent, and Malek system discloses the initiation of the encryption/decryption process occurs each time a wireless connection is set up, comprising initial connection, connection hand off, and connection reestablishment after unexpected connection loss (see Malek column 4 lines 47-57).

12. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Dent, and Malek system as applied to claim 25 above, and further in view of Lynn et al.

As per claim 26, the modified Albert et al., Dent, and Malek system fails to disclose the encryption synchronization means is further configured to provide a current encryption key to receiving devices and sending devices in the wireless communication network.

However, Lynn teaches such synchronization (see column 2 lines 47-51 and column 5 line 40 through column 6 line 23).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the synchronization of Lynn in the modified Albert et al., Dent, and Malek system.

Art Unit: 2137

Motivation to do so would have been to not require additional recovery procedures (see Lynn column 2 lines 47-51).

As per claim 27, the modified Albert et al., Dent, and Malek system discloses the encryption synchronization means is further configured to count data blocks in a message being transmitted to determine when to begin encryption/decryption (see Lynn column 5 line 40 through column 6 line 23).

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Albert et al., Dent, Malek, and Lynn system as applied to claim 26 above, and further in view of Schneier (Applied Cryptography).

As per claim 28, the modified Albert et al., Dent, Malek, and Lynn system fails to disclose the use of a state box.

However, Schneier teaches such a state box (see pages 397-398).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Schneier's state box as the cryptosystem of the modified Malek, Lynn, and Dent system.

Motivation to do so would have been the simplicity of the algorithm (see page 398).

Response to Arguments

14. Applicant's arguments filed 06/27/2007 have been fully considered but they are not persuasive. Applicant argues that Albert fails to disclose the control message is used to provide at least one other control function related to the setup of a wireless communication.

With respect to Applicant's argument that Albert fails to disclose the control message is used to provide at least one other control function related to the setup of a wireless communication, the header portion containing the flags is considered the control message and there are at least two flags, one for encryption and one for compression (see column 17 lines 12-30). Therefore, Albert discloses the control message is used to provide at least one other control function (compression). This function is **related** to the setup of a wireless communication because the parameters for encryption and/or compression must be configured during setup in order for the communication to work, as evidenced by Mizikovsky (US 5943425). So the function is therefore related to the setup. Furthermore, giving the term "related" its broadest reasonable interpretation, every message sent including the messages with control data for a control function is related to the setup of a wireless communication because without this relationship the

Art Unit: 2137

functions would not know what connection to act upon or where to send the messages. In other words since the connection is setup at one point every message in that connection is related to that original setup. Therefore, the control function is related to the setup of a wireless communication.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mizikovsky and

Art Unit: 2137

Rhoads et al. (US 6775270) teach that compression and/or encryption is configured during the setup of a wireless connection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJP


EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER